



# UNITED STATES PATENT AND TRADEMARK OFFICE

6.1

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/719,893

12/19/2000

Mitsuhiko Okada

55259USA2A.005

5878

32692

7590

01/06/2004

3M INNOVATIVE PROPERTIES COMPANY  
PO BOX 33427  
ST. PAUL, MN 55133-3427

EXAMINER

BISSETT, MELANIE D

ART UNIT

PAPER NUMBER

1711

DATE MAILED: 01/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No</b>	<b>Applicant(s)</b>	
	09/719,893	OKADA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Melanie D. Bissett	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9, 11 and 18-20 is/are allowed.
- 6) ☒ Claim(s) 12-17 and 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.                                   |

Art Unit: 1711

1. The rejections have been maintained in part and withdrawn in part as necessitated by amendment.

***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 21 and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bujard in view of DuPont. Note that the DuPont reference supplied to the applicant was missing drawings. The examiner has found another version of this document including the drawings, which is presently provided to the applicant.

4. From a prior Office action:

Bujard teaches that adhesives may be applied in molten form (col. 2 lines 23-26). Bujard applies as above, teaching methods for applying coatings by known coating methods including brushing and doctor coating (col. 2 lines 59-62) but failing to specifically teach the steps of supporting the substrate and removing the substrate from the support after coating. Du Pont teaches an improved method of coating by supplying a substrate support for the substrate and metering and supplying a coating solution by meyer bar onto the substrate (p. 2 line 33-p. 3 line 11), where the meyer bar acts similarly to a doctor bar to "squeegee off" excess liquid coating (p. 4 lines 16-30). The product would be removed from the support to be used. Since the coating apparatus provides a substantially uniform coating, it is the examiner's position that it would have been prima facie obvious to use the meyer rod method of DuPont's teaching in Bujard's invention to provide coatings having improved uniformity. Thus, the use of molten adhesive and meyer bar coating suggests the use of heat and an amount of pressure to coat the substrate.

Additionally, Bujard teaches curing the adhesive layers by the mention of hardeners and curing accelerators in the preferred adhesive composition (col. 2 lines 30-35).

5. The method claim has been amended to include the limitation "supporting said substrate by a support by releasably bonding a second surface of the substrate to the support". Note that DuPont discloses taping the edges of the substrate to the substrate

Art Unit: 1711

support (p. 11 lines 36-37; figures 1 and 3). Thus, DuPont's method suggests releasably bonding a second surface of the substrate to a support, which is later released.

#### ***Allowable Subject Matter***

6. Claims 1-9, 11, and 18-20 allowed.

7. The following is an examiner's statement of reasons for allowance:

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. The closest prior art, Bujard (US 5,399,416 A), discloses a laminate having a self-supportive heat conductive adhesive and a substrate, where the substrate has a thickness of 10-100  $\mu\text{m}$ . However, the reference does not indicate substrates having thicknesses of 1-7  $\mu\text{m}$ , including single spread adhesive film substrates. The prior art does not teach the formation of self-supportive sheets having substrates thinner than 10  $\mu\text{m}$ . Thus, it is the examiner's position that the applicant's claimed heat-conductive sheet having a substrate of 1-7  $\mu\text{m}$  would be novel and unobvious over the prior art.

#### ***Response to Arguments***

10. In response to the applicant's arguments that the DuPont reference teaches at most attaching the leading edges but not attaching the second surface of the substrate

Art Unit: 1711

to a support, the examiner respectfully disagrees with this interpretation of the reference. Figure 1 of the drawings clearly shows that the second surface of the substrate should be parallel with the substrate support. Although the reference teaches that the leading edges may be taped to bond the substrate to the support, it is the examiner's position that the reference is teaching a method of tacking the edges of the substrate to the support, where the substrate lies flat on the support. The second surface of the substrate contacts the support, being attached to the support by taping the edges.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Art Unit: 1711

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb

  
RABON SERGENT  
PRIMARY EXAMINER